

**ABSTRACT**  
**FIRE RETARDANT INTUMESCENT COATING**

A fire retardant intumescent coating composition comprises:

- (a) 30 to 60% by weight of a phosphorous containing material which decomposes to produce phosphoric acid when the coating is exposed to fire;
- (b) 10 to 30% by weight of a thermosetting binder;
- (c) 2.5 to 10% by weight of a curing agent for the thermosetting binder; and
- (d) 5 to 40% by weight of a thermoplastic binder,

wherein the active groups of the thermosetting and thermoplastic binders are chosen so as to impart charring and blowing functions to the intumescent coating composition.

The thermosetting binder is advantageously a hydroxylated thermosetting binder, suitably an epoxy resin.

The thermoplastic binder is advantageously an oxygenated heterocyclic thermoplastic binder, suitably an aldehyde and/or ketone resin.

The coating composition may contain 1 to 10% by weight of a colouring agent, suitably titanium dioxide.

The coating composition may contain 0.1 to 10% by weight of melt viscosity modifier, suitably hydrogenated castor oil.